Douglas P. Williams
Impressions, Inc.
P.O. Box 7
Elkhart, IN 46516-0007

Re: Registered Construction and Operation Status
039-11599-00257

Dear Mr. Williams:

The application from Impressions, Inc., received on November 23, 1999, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the emission source, a printing press operator to be located at 1227 West Beardsley Avenue, Elkhart, IN 46514-2223, remains classified as registered. This emission source consists of the following facilities:

(a) One non-heat set offset printer identified as Heidleberg 40", with a maximum line speed of 270.83 feet per minute and a printing width of 39 inches.

(b) One non-heat set offset printer identified as 2 Color HID, with a maximum line speed of 197.92 feet per minute and a printing width of 19 inches.

(c) One non-heat set offset printer identified as 5 Color KOM, with a maximum line speed of 215.28 feet per minute and a printing width of 19 inches.

(d) One non-heat set offset printer identified as 17-2 Color, with a maximum line speed of 38.19 feet per minute and a printing width of 19 inches.

(e) One non-heat set offset printer identified as 19-2 Color, with a maximum line speed of 38.19 feet per minute and a printing width of 8.5 inches.

(f) One non-heat set offset printer identified as Model Miller TP38, with a maximum line speed of 243.06 feet per minute and a printing width of 29 inches.

(g) One non-heat set offset printer identified as Model AB Dick 380, with a maximum line speed of 160.42 feet per minute and a printing width of 8.5 inches.

(h) One non-heat set offset printer identified as Model Toko 4750CD, with a maximum line speed of 38.19 feet per minute and a printing width of 8.5 inches.

(i) Natural gas-fired combustion totaling less than 10 million British thermal units per hour.

This registration is the third air approval issued to this source. The facilities approved under registration letters 039-5112-00257 and 039-8722-00257 have been incorporated into this registration.

An authorized individual shall provide an annual notice to the Office of Air Management that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

The VOC potential emissions from this source are less than two (2) tons per month. Therefore, the best available control technology (BACT) requirement in 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) does not apply. Any change or modification which may increase VOC potential emissions to 25 tons per year or more from this source shall obtain OAM approval before such change may occur.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

ARD

cc: File - Elkhart County
Elkhart County Health Department
IDEM - Northern Regional Office
Air Compliance Section Inspector - Greg Wingstrom
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) or 326 IAC 2-5.5-4(a)(3).

Company Name:	Impressions, Inc.
Address:	1227 West Beardsley Avenue
City:	Elkhart, IN 46514-2223
Authorized individual:	
Phone #:	
Registration #:	039-11599-00257

I hereby certify that Impressions, Inc. is still in operation and is in compliance with the requirements of Registration 039-11599-00257.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	**Impressions, Inc.**
Source Location:	**1227 West Beardsley Avenue, Elkhart, IN 46514-2223**
County:	**Elkhart**
SIC Code:	**2752**
Registration Number:	**039-11599-00257**
Permit Reviewer:	**Allen R. Davidson**

On November 23, 1999, the Office of Air Management (OAM) received an application from Impressions, Inc. relating to the construction and operation of the following equipment:

(a) One non-heat set offset printer identified as Heidleberg 40", with a maximum line speed of 270.83 feet per minute and a printing width of 39 inches.

(b) One non-heat set offset printer identified as 2 Color HID, with a maximum line speed of 197.92 feet per minute and a printing width of 19 inches.

(c) One non-heat set offset printer identified as 5 Color KOM, with a maximum line speed of 215.28 feet per minute and a printing width of 19 inches.

(d) One non-heat set offset printer identified as 17-2 Color, with a maximum line speed of 38.19 feet per minute and a printing width of 19 inches.

(e) One non-heat set offset printer identified as 19-2 Color, with a maximum line speed of 38.19 feet per minute and a printing width of 8.5 inches.

(f) One non-heat set offset printer identified as Model Miller TP38, with a maximum line speed of 243.06 feet per minute and a printing width of 29 inches.

(g) One non-heat set offset printer identified as Model AB Dick 380, with a maximum line speed of 160.42 feet per minute and a printing width of 8.5 inches.

(h) One non-heat set offset printer identified as Model Toko 4750CD, with a maximum line speed of 38.19 feet per minute and a printing width of 8.5 inches.

(i) Natural gas-fired combustion totaling less than 10 million British thermal units per hour.

History

Impressions, Inc. was issued a registration for six printing presses and six natural gas-fired combustion units on January 11, 1996. Another registration for three additional printing presses was issued on August 27, 1997.

This application is the first revision since August 27, 1997. The source is removing two printers that were previously approved and adding a new printer. Also, three additional natural gas-fired combustion units, classifiable as an insignificant activity under 326 IAC 2-7-1(21), were added to the source.

Enforcement Issues

There are no enforcement actions pending against this emission source.

Stack Summary

Stack information will not be affected by this revision.

Recommendation

The staff recommends to the Commissioner that the revision be approved as a registration. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on November 23, 1999.

Emission Calculations

See Appendix A of this document for detailed emissions calculations. (3 pages)

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

The source potential to emit is as follows:

Pollutant	Potential To Emit (tons/year)
PM	0.3
PM-10	0.3
SO_2	0.0
VOC	14.2
CO	3.7
NO_x	4.4

HAP's	Potential To Emit (tons/year)
Toluene	0.1
TOTAL	0.1

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) a single hazardous air pollutant (HAP) is not equal to or greater than ten (10) tons per year, and the potential to emit a combination of HAP is not greater than or equal to twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

The potential to emit volatile organic compounds (VOC) is less than 25 tons per year, but greater than 10 tons per year. Therefore, the source requires a registration under 326 IAC 2-5.1.

This source is not a major source for Prevention of Significant Deterioration, 326 IAC 2-2. No attainment regulated pollutant has the potential to emit at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone.

This revision is not a major modification for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 because the increase in potential to emit every attainment pollutant is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source. Subpart QQ is not applicable since the pressses are not rotogravure printing presses.

There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source. Subpart KK is applicable only to major sources of hazardous air pollutants.

State Rule Applicability - Entire Source

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

This source is not subject to 326 IAC 2-4.1-1 (New Source Toxics Control). The source does not have potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAPs.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because it does not have the potential to emit more than one hundred (100) tons per year of any pollutant specified in the rule.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Printing Presses

326 IAC 8-5-5 (Miscellaneous Operations: Graphic Arts Operations)

This facility is not subject to 326 IAC 8-5-5 since it is not a packaging rotogravure, publication rotogravure, nor flexographic printing press.

326 IAC 8-1-6 (General VOC Reduction Requirements)

These emission units are not subject to 326 IAC 8-1-6 (General Reduction Requirements) because the potential to emit volatile organic compounds is less than twenty-five (25) tons per year. Therefore, the BACT (best available control technology) requirements do not apply.

State Rule Applicability - Natural Gas-Fired Combustion Units

There are no state rules specifically applicable to these facilities.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as hazardous air pollutants on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

This source will emit levels of hazardous air pollutants less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments. See attached calculations for detailed hazardous air pollutant calculations. (3 pages)

Conclusion

The operation of this source shall be subject to the conditions of the attached registration, No 039-11599-00257.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Impressions, Inc.
Address City IN Zip: Elkhart, IN 46514
CP: 039-11599
Plt ID: 039-00257
Reviewer: Allen R. Davidson
Date: 11/23/99

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
10.0	87.6

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.1	0.3	0.0	4.4	0.2	3.7

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

HAPs Emissions

Company Name: Impressions, Inc.
Address City IN Zip: Elkhart, IN 46514
CP: 039-11599
Plt ID: 039-00257
Reviewer: Allen R. Davidson
Date: 11/23/99

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	9.198E-05	5.256E-05	3.285E-03	7.884E-02	1.489E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	2.190E-05	4.818E-05	6.132E-05	1.664E-05	9.198E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
VOC From Printing Press Operations

Company Name: Impressions, Inc.
Address City IN Zip: Elkhart, IN 46514
CP: 039-11599
Plt ID: 039-00257
Reviewer: Allen R. Davidson
Date: 11/23/99

THROUGHPUT

Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin^2/YEAR
MIller TP38	286.458	24.5	44265
KOM	214.583	18.75	25377
HID	162.378	19	19459
Heidleberg 40"	270.833	25.5	43559
Toko 4750CD	121.528	12	9198
19-2 Color	121.528	12	9198
17-2 Color	121.528	12	9198
AB Dick 380	160.444	10.5	10626
		Total	170879.37

INK VOCS

Ink or Solvent Name	Maxium Coverage '(lbs/MMin^2)	Weight % Volatiles*	Flash Off %	Throughput (MMin^2/Year)	Emissions (TONS/YEAR)
Diatone 2001-X Process Black	0.455	15.61%	100.00%	170879	6.07
Color Wash Step 1	0.011	66.16%	100.00%	170879	0.62
Wash V-120	0.063	100.00%	100.00%	170879	5.38
Hydro Plus	0.005	98.00%	100.00%	170879	0.42
Prisco	0.001	84.00%	100.00%	170879	0.07
Dynafount	0.005	84.20%	100.00%	170879	0.36
Isopropyl Alcohol	0.0004	100.00%	100.00%	170879	0.03
Toluene	0.001	100.00%	100.00%	170879	0.09
DN-5M Machine/Developer	0.0124	95.00%	100.00%	170879	1.01

Total VOC Emissions =	**14.05 Ton/yr**

*VOC (Tons/Year) = Maximum Coverage pounds per MMin^2 * Weight % volatiles (weight % of water & organics - weight % of water = weight % organics) * Flash off * Throughput * 1 Ton per 2000 pounds

METHODOLOGY

Throughput = Maxium line speed feet per minute * Convert feet to inches * Maximum print width inches * 60 minutes per hour * 8760 hours per year = MMin^2 per Year
VOC = Maximum Coverage pounds per MMin^2 * Weight percentage volatiles (water minus organics) * Flash off * Throughput * Tons per 2000 pounds = Tons per Year
NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.
(Source -OAQPS Draft Guidance, "Control of Volatile Organic Compound Emisions from Offset Lithographic Printing (9/93))